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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,408	08/01/2001	Ernest Csendes	5078	6040
23512	7590	09/21/2004	EXAMINER	
EDWARD A SOKOLSKI 3868 CARSON STREET, 105 TORRANCE, CA 90503			BHAT, NINA NMN	
			ART UNIT	PAPER NUMBER

1764

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/921,408	Applicant(s) CSENDES, ERNEST	
	Examiner N. Bhat	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8-1-2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being obvious over Csendes USP 6,044,977 in combination with Nau et al.

The applied reference to Csendes has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application

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and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Csendes teaches a method and apparatus for removing microparticulates from a gas which includes a chamber which has a drive shaft rotatably mounted therein and including a plurality of screens having a mesh of 6-10 mesh which are placed from each other along the longitudinal extent of the of the chamber in opposing relation and attached to the drive shaft for rotation there with. The gas passes through the rotating screens which communicate and modify the surface characteristics of the microparticulates in the gaze and then through circular vortex zones formed between the spinning discs and their opposing plates separates the particles from the gas to provides a more purified gas. The vapor is fed to the bottom portion of the container and then passed through an array of semi permeable screens at speeds between 1,200-10,000 rpm, which overlaps in range with the rotation speed claimed by applicant.[Note the abstract and Column 4, lines 10-67]. Csendes teaches that hot pressurized gases are feed into the chamber; a compressor fan moves the gases through the high speed rotating screens wherein the larger diameter particles in the gases are repulsed and the drop down for recycling. The faster moving particles, which

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pass through the screens, enter air erosion zones created by spiral vortexes above each screen. The hot gases are fed out of the chamber and the gases, which include particles, are passed out of the chamber and then recycled. [Note column 5, lines 1-20 and claims 11-12].

However, Csendes does not teach providing the rotating discs within a distillation column for separating out impurities of a liquid which is vaporized, the vapor then being passed through an array of semi-permeable screens rotatably mounted in a container.

Nau et al. teach a rotary separator which separates a mixture of gases through the combined action of distillation and centrifugal forces. The apparatus includes a rotating separator that separates mixed gases that differ in volatility. The distillation process occurs over a plurality of cascading stages in which the condensed liquid is serially boiled the more volatile vapors pass through the sieves and then the vapors are serially condensed liquefying the less volatile vapors.[Note Column 1, lines 30-67]

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a system for separating out impurities from a liquid which includes a distiller for distilling the liquid to convert it into a vapor container, vapor being feed and introduced within the container to an array of semi-permeable screens rotatably mounted in the container and means for rotating the screens and a condenser to condense the vapor back into a liquid state. The concept of providing a rotary separator for removing impurities from a gas which is subsequently condensed into liquid streams has been taught by Nau Csendes'977 teach the purifying or removing

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microparticulates from a gas and teaches an apparatus to effect the purification process. It is maintained that from the teachings of Nau and Csendes '977 to retrofit a distillation apparatus with an apparatus which includes an array of semi-permeable screens rotatably mounted in the container and means for rotating the screens at a speed of 3,000-10,000 rpm to generate vertical spiral vortexes which act on the vapor to separate out impurities would have been an obvious design choice to one having ordinary skill in the art since Nau teaches a rotary separator which includes distillation and separation and purification of a vapor stream.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCutchen teach a rotary vacuum distillation and desalination apparatus. McCutchen specifically teaches creating a vapor vortex by centrifugal forces, which ejects the denser gases, and also any particles or droplets entrained in the vapor. Kusakabe et al. teach a distillation system for treating waste organic solvent using thin membrane distillation apparatus. Humiston teach an evaporative and centrifugal apparatus for effecting concentration and /or purification of the feedstocks. Csendes'371 teach a method and apparatus for reducing acid and air toxic emissions in the combustion of comminuted solid particles.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



N. Bhat
Primary Examiner
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